

REMARKS

Reconsideration and withdrawal of the examiner's rejections under 35 USC § 103 are respectfully requested in view of the claim amendments and following remarks.

Claims 1, 14 and 17 have been amended, without prejudice, to specify less than about 85 % oil. Support for this subject matter may be found throughout the Specification and in claim 4.

Claim 17 has been further amended by incorporating the subject matter of Claim 18, which has been canceled, without prejudice.

Claim 21 has been amended by incorporating the subject matter of claim 24, which has been canceled, without prejudice.

Care has been taken not to introduce any new matter.

The Present Invention

As set forth in independent claims 1, 14 and 17, the present inventions are directed to an edible *oil-in-water* emulsion, a method for making the edible emulsion and a food product comprising the edible emulsion having less than 85 % oil. The edible emulsion comprises, among other things, insoluble fibers and specifically 0.5 to 12% by weight emulsifier comprising a viscosity-building emulsifier that at 2.0% by weight is partially or completely not soluble in acidified deionized water having a pH of less than or equal to 5.5, or a viscosity-building emulsifier that is at least about 50% by weight protein, or both. The viscosity-building emulsifier makes up from 0.1 to 4.0% by weight of the edible emulsion, with the proviso that when chemical emulsifier is used, *less chemical emulsifier is used than viscosity-building emulsifier*. The reduced oil food products made with the edible emulsion have consumer acceptable appearances, viscosities and texture, as well as sensorial properties consistent with full fat products.

Furthermore, the food products made with the edible emulsion comprising insoluble fiber, thickener and viscosity-building emulsifier of this invention have, in addition to excellent texture and sensorial properties, the added health benefit associated with food products containing fiber. Such food products also have the benefit of being substantially free of carbohydrates; therefore, very desirable to high protein/low carbohydrate dieters.

Insoluble fiber, according to the present invention, means fiber that is not water soluble whereby, when the same is supplied as an additive composition, the additive composition is not more than 50 % by weight soluble fiber, based on total weight of soluble and insoluble fiber in the additive composition.

The Present Invention is Not Obvious under 35 U.S.C. § 103(a)

Claims 1, 3, 4 and 8-25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hercules in view of Fischer as further evidenced by Lowe and also Schwartzberg. According to the Office Action, Hercules discloses low fat salad dressing made to contain a pectin derivative as a fat substitute.; The dressing formulation starting at line 37 bridging col. 6 and 7 is referenced; Casein is a selected protein for this composition.; It is appreciated that "viscosity building" emulsifier is not mentioned in the reference.

Fischer is cited to cure the failure of Hercules to disclose insoluble fibers, although the combination is still deficient as to viscosity building emulsifier, the HLB of the emulsifiers, the oil droplet size of the composition, and homogenizer settings. Swartzberg is relied upon for HLB. Further, Lowe is relied upon for casein and egg white as emulsifier. According to the Office Action, no unobvious or unexpected result is seen from oil droplet size. According to the Office Action, it is also appreciated that the settings for the homogenizer are not mentioned but to use one type of colloid mill over another would have been an obvious matter of choice with regard to the particular homogenizing apparatus that was available.

Applicants respectfully traverse.

Hercules is merely directed to a 0 to low fat salad dressing composition with a continuous aqueous phase having a semi-gelled pourable system comprising an amidated galacturonic acid methylester with a degree of esterification below 55% to replace part or all of the fat in the salad dressing. Hercules fails to disclose or suggest insoluble fibers, and the modified molecules described in Hercules are not the same as the pectin naturally associated with the citrus fibers such as Herbacel AQ of Fischer.

Accordingly, Hercules is not only a deficient reference which cannot be cured by Fischer and the other references, but the combination of Hercules with Fischer is not proper. While Fischer mentions ice cream and sorbet, there is not disclosure or suggestion to use Herbacel AQ in a dressing. Fischer describes Herbacel AQ for applications where viscosity enhancement or thickening are acceptable as a side effect of dietary fiber fortification. Accordingly, one skilled in the art would have no motivation to combine Hercules with Fischer. There is no suggestion in either of the references that would lead one skilled in the art to combine them. Accordingly, a *prima facie* case of obviousness has not been shown.

Applicants offer the following additional comments. Hercules is deficient, and these deficiencies are not remedied by Fischer and/or Schwartzberg and/or Lowe. Applicants claim a unique combination of emulsifiers, uniquely combined with other ingredients, to produce a composition having unique properties.

Emulsifier System

The present invention differs from the cited art in the requirement of a unique emulsifier system. While emulsifying agents like egg and casein are known in general and individually, a specific emulsifying system having 0.5 to 12 % by weight of emulsifier wherein the emulsifier comprises viscosity building emulsifier as set forth in the independent claims is not shown or suggested.

The present invention differs from the cited art in the requirement that the protein in the oil-in-water emulsion composition be a viscosity building emulsifier. Notably, the presence of the viscosity building emulsifiers has shown (see example 2) that mayonnaise made via this invention has shine or sheen (which was key), firmness, mouth dissipation, and viscosity consistent with real mayonnaise, notwithstanding the

fact that about 42% less oil was used. None of the references in any combination discloses the emulsifier mixture now depicted in the amended claims, all of which is important to achieve the above-described desired rheological and appearance characteristics. As to claims 22 and 23, these claims further define the food product by characterizing mouth dissipation and product sheen to that which is similar to full fat mayonnaise which typically has about 76% by weight oil.

High Pressure Homogenizer

The claims differ from the cited art in the use of the high pressure homogenizer. In contrast, Hercules does not require high shear in order to obtain its desired texture. See Hercules and col. 4, lines 12-20.

The high pressure homogenizer used according to the present invention is used to activate the insoluble fibers to increase the viscosity of the product. The homogenizer is also used to create texture contrast from coarse to smooth, as well as to reduce oil droplet size. The use of insoluble fibers according to the present invention processed in a HPH allows for partial replacement of starch and gums on reduced oil products such as mayonnaise. The result is a low oil mayonnaise without sticky mouthfeel. This brings low oil mayonnaise in parity to full fat products. The invention is directed to a reduced oil product that unexpectedly has the mouthfeel of a full fat product, as discussed in the Specification at page 4, lines 15-17.

In view of this, the obviousness rejection should be reconsidered and withdrawn.

CONCLUSION

In light of the above amendments and remarks, applicants submit that all claims now pending in the present application are in condition for allowance. Reconsideration and allowance of the application is respectfully requested.

If a telephone conversation would be of assistance, Applicant's undersigned attorney invites the Examiner to telephone at the number provided.

Respectfully submitted,

/Ellen Plotkin/

Ellen Plotkin
Registration No. 36,636
Attorney for Applicant(s)

EP/ss
(201) 894-2253